REQUEST FOR PROPOSAL
DE-RP26-00NT40761
ARCHITECT/ENGINEER SERVICES
FOR THE
U.S. DEPARTMENT OF ENERGY
NATIONAL ENERGY TECHNOLOGY LABORATORY

Professional Architect/Engineering (A/E) services for the preparation and procurement support for facility related construction projects at the National Energy Technology Labortory (NETL),located in Morgantown, West Virginia and Pittsburgh, Pennsylvania. An indefinite delivery order type of contract is contemplated with a 36-month base period and two twelve-month options. Performance will include various types of A/E tasks related to construction projects and renovation or modification of existing facilities. The tasks shall include: (a) Title I - preliminary design services such as conceptual design, material and cost estimates, and feasibility studies; (b) Title II - detailed design services such as preparation of specifications and drawings; (c) Title III - construction and fabrication inspection services; (d) in-house energy management activities; (e) computer aided drafting and design support services; (f) value engineering activities; (g) facility condition assessment; and (h) other technical support services. The selected firm, its subsidiaries and affiliates, will be barred from award of any construction projects that the firm designed. The contracts will guarantee a minimum dollar amount of task agreements. The total contract base period is estimated between $750,000 and $1,200,000 inclusive of fees, the twelve month options are estimated between $250,000 and $400,000 each inclusive of fees. It is anticipated that there will be one award resulting from this procurement. However, the

Government reserves the right to make no award, if it is considered to be in the Government's best interest to do so. As a result of provisions of the Small Business Competitive Demonstration Program, Title VII of Public Law 100-656, The Department of Energy (DOE) National Energy Technology Labortory (NETL) reserves the right to award contracts with a value under $50,000 for work in SIC Codes 8711 and 8712 to small business firms. Only firms within a 50 mile radius of the NETL sites, with some or all of the following in-house disciplines, architectural, electrical, civil, mechanical, HVAC, environmental, safety, and health capabilities, as a minimum, will be considered. Expressions of interest will be accepted from joint ventures and other combinations, but DOE will contract with only a single business entity. In the case of joint ventures and other combinations, the combined experience and resources of all participants will be viewed for purposes of evaluation. The evaluation criteria to be used in the selection are: (A) General Qualifications and (B) Personnel and Organization. Personnel and Organization is more important than General Qualifications. Under (A) General Qualifications, the evaluation factors in descending order of importance are: (1) Experience and technical competence of the firm in comparable work, such as work in facility design, construction, inspection, HVAC, energy management, technical standards development, value engineering, and environmental, safety, and health (2) Adequacy of central or branch office facilities for the proposed work including facilities for any special services that may be required (number of CAD systems, types of CAD software, etc.) (3) Past record in performing work for DOE, other Government agencies, and private industry, including projects or contracts implemented with, and/or without overruns, performance from the standpoint

of cost including cost overruns (last 5 years), the nature, extent, and effectiveness of contractor's cost reduction program, quality of work, and ability to meet schedules including schedule over-runs (last 5 years) (where applicable) (4) Geographic location of the home office and familiarity with the localities in which NETL is located (5) Reputation and standing of the firm and its principal members (6) Volume of past and present workloads and type of workload (7) Interest of company management in the project and expected participation and contributions of top officials. Under (B) Personnel and Organization, the evaluation factors in descending order of importance are: (1) Specific experience and qualifications of personnel proposed for assignment to the project, including as required for various phases of the work (a) Technical skills and abilities (types of discipline, number of architects, electrical, mechanical, civil, HVAC engineers, etc.) (b) Abilities of key personnel in overall project coordination, planning, organizing, executing, controlling, and management (c) Experience in working together as a team (2) Proposed project organization, delegations of responsibility, and assignment of authority (3) Past experience of the Project Manager in handling numerous multi-phase projects, accelerated deadlines and fluctuating fiscal budgets (4) Availability of additional competent, regular employees for support of the project, and depth and size of the organization so that any necessary expansion or acceleration could be handled adequately (5) Ability to assign adequate qualified personnel from the proposed organization (firm's own organization, joint venture organizations, consulting firms, etc.) including key personnel and a competent supervisory representative (6) Experience and qualifications of proposed consultants and subcontractors. The selection of the most qualified contractor for negotiation of a contract will be based on

the above evaluation criteria and judgement of the selection official. Those firms who meet the requirements described in this announcement and wish to be considered for selection should submit copies of SF 254 and SF 255 to the address above. In addition to a specific response to the evaluation criteria in the order listed, the following supplemental data is required: a list of key personnel, with resumes, who would be committed to the project; proposed organization chart which reflects designing, scheduling, and monitoring, including key personnel and consultants; tabulation matrix showing the key personnel's experience working together; narrative description of the proposed project management and cost/schedule control system; discussion of experience and performance record on project planning, scheduling, and cost estimating; description of facilities and tools for performing the work; references for the firm's work on similar projects and references for proposed key personnel, including names, telephone numbers, and addresses; and a list of states and categories in which your organization is legally qualified to do business, including registration or license numbers. Those firms wishing to be considered shall submit an original and six (6) copies of the appropriate data not later than 4:00 pm, February 10, 2000. Responding firms are required to state whether they are small business, small disadvantaged business and/or woman-owned business in Block 5 of SF 255. Responses to the announcement shall not exceed one hundred (100) pages, excluding resumes. A request for proposal (RFP) will not be issued; therefore responses to the announcement should be complete. The point of contact is to the attention of John R. Owen, MS 921-107, National Energy Technology Laboratory, P.O. Box 10940, Pittsburgh, PA 15236-0940, (412) 386-4879, E-mail at: owen@netl.doe.gov.

STATEMENT OF WORK

ARCHITECT/ENGINEER DESIGN SERVICES

PR# 00NT40761

SITE OPERATIONS DIVISION
NATIONAL ENERGY TECHNOLOGY LABORTORY
U. S. DEPARTMENT OF ENERGY
P. 0. BOX 10940
PITTSBURGH, PENNSYLVANIA 15236

ARCHITECT/ENGINEER DESIGN SERVICES

STATEMENT OF WORK

1.0 BACKGROUND

The U.S. Department of Energy/Nationall Energy Technology Labortory (DOE/NETL) has research facilities located in Pittsburgh, Pennsylvania and in Morgantown, West Virginia.

The Bruceton Research Center is jointly owned and operated by three separate Federal organizations. They include the National Institute of Safety and Health (NIOSH); the Department of Labor's Mine Safety and Health Administration (MSHA); and the Department of Energy Is National Energy Technology Labortory (NETL). The facilities assigned to NETL in Pittsburgh include 31 buildings and three trailers with a combined total of 419,317 square feet of floor space. Facilities at the Morgantown Campus include 35 buildings and 18 office trailers, with a combined total of 353,236 square feet of floor space. This "Statement of Work" (SOW) shall only address the facilities owned and operated by the DOE/NETL.

The National Energy Technology Labortory has evolved over the past four decades into one of the Federal government's most comprehensive coal technology research centers, performing a major role in the DOE's mission to produce clean energy from coal, our most abundant energy resource. The research program at NETL emphasizes new technologies that hold promise for increasing the utilization of coal in an environmentally acceptable manner.

At present, NETL is the Department of Energy's lead laboratory in research and development of technologies that are important to fossil energy. NETL does in-house research and manages contract research programs to support program, product and new business development, initiate cooperative R&D, sponsor education and outreach, produce unbiased technical evaluations, and improve technical processes.

2.0 OBJECTIVE

This requirement is for professional Architect-Engineering (A/E) services for the preparation and procurement support for facility related construction projects at the National Energy Technology Labortory in Bruceton, Pennsylvania and Morgantown, WV on a task-order basis. The A/E will provide the complete design including preparation of all required preliminary and final drawings, specifications and cost estimates, and consult with DOE on all questions arising in connection with the services performed.

The special requirements, design information, descriptions, and specifications necessary to define the statement of work for the task are described below.

3.0 A/E SERVICES

3.1 General

3.1.1 The contractor, except as may be otherwise specified herein, shall furnish the necessary management, supervision, qualified personnel, materials, supplies, equipment, facilities, training, technical expertise, and services required to provide the National Energy Technology Labortory with the architectural and engineering design services delineated herein as may otherwise be authorized by the Contracting Officer on a task order basis.

3.1.2 The contractor must be capable of providing in-house architectural and engineering design services for architectural, electrical, civil, mechanical, HVAC, environmental, safety, and health disciplines. The contractor must be capable of providing homogeneous and consistent in-house architectural and engineering design services as the intensity of work varies for each discipline. Typically, unless otherwise authorized by the Contracting Officer because of mitigating or special circumstances, all architectural and engineering design services shall be provided by resident in-house personnel.

3.1.3 The contractor may utilize services, personnel, or other necessary facilities of its field or home offices to support the National Energy Technology Labortory as authorized by the Contracting Officer.

3.2 Definitions

3.2.1 "DOE" shall mean the United States Department of Energy or its authorized representative.

3.2.2 "NETL" shall mean the National Energy Technology Labortory, a field office of the Department of Energy located on two sites, one south of Pittsburgh, Pennsylvania in South Park Township and the second in Morgantown, north of the University of West Virginia campus.

3.2.3 "Government" shall mean the United States Department of Energy or its duly authorized Contracting or Technical Representative.

3.2.4 "CO" shall mean the United States Department of Energy's duly authorized Contracting Officer.

3.2.5 "COR" shall mean the Unites States Department of Energy's duly authorized Contracting Officer's Representative.

3.2.6 "Task Monitor" shall mean the United States Department of Energy's COR for a specific task.

3.2.7 "Contractor" shall mean the party contracting with the United States Department of Energy in performance of the contract.

3.2.8 "Subcontractor" and "Subcontractors" shall mean any supplier, distributor, vendor, or firm that furnishes services to or for a prime contractor or another subcontractor.

3.2.9 "On-Site" shall mean that the contractor shall provide the specified service or work at the United States Department of Energy's National Energy Technology Labortory in Pittsburgh (South Park Township), Pennsylvania or in Morgantown, West Virginia.

3.2.10 "Home Office" shall mean the contractor's permanent business office location.

3.2.11 A/E shall mean the architectural and engineering design contractor.

3.3 DOE Orders and NETL Technical Standards

3.3.1 As a minimum, the architectural and engineering services to be provided by the contractor shall satisfy, comply with, and implement the latest issue of the DOE Orders referenced below. DOE Directives associated with this contract are located on the DOE website e-mail address, " http://www.explorer.doe.gov " see also 3.13 other Reference Documents).

3.3.1.1 Order 6430.IA, "General Design Criteria for DOE Facilities;"

3.3.1.2 Order 0450.4-1A Volumes 1&2 , "Integrated Safety Management Guide" (Safety Analysis and Review System);

3.3.1.3 Order 5480.22, "Environmental Protection, Safety, and Health Protection Standards;"

3.3.1.4 Order 0430.2, "In-House Energy Management;"

3.3.1.5 Order 4010 titled "Value Engineering;"

3.3.1.6 Order 1332.IA titled "Uniform Contractor Reporting System;"

3.3.1.7 Order 0414.1 titled "Quality Assurance:"

3.3.1.8 Order 0430.1A, " Life Cycle Asset Management"

3.4 Materials and Workmanship

3.4.1 All contractor materials and workmanship specified shall, as a minimum, be in accordance to the latest issue of NETL's Engineering Standards or specific codes (i.e., national, state, or local) approved by the COR and authorized by the CO on a delivery order basis.

3.4.2 The contractor shall provide the COR with copies of all required material certificates, nondestructive test reports, code data, and qualification certificates. In addition, the contractor shall address control and maintenance of these documents in its Quality Assurance Plan.

3.5 Government Furnished Services

The government shall furnish the following for the contractor's limited use, for the performance of this Statement of Work, and in accordance with the provisions of this contract:

3.5.1 Access to and copies of existing drawings, records, information, and data necessary for contract performance. (Computer aided drawings are under development and will be made available when completed).

3.5.2 Occasional on-site work space as determined by the COR for the term and performances of this contract.

3.6 Contract Deliverables

Deliverables required by this contract are the property of the government. Further distribution or use of contract deliverables for purposes beyond those authorized by the CO are prohibited. Prior to contract expiration or termination, all outstanding contract deliverables are to be given to the government COR. Ample time shall be allowed by the contractor to permit DOE's required review of draft deliverables and permit the contractors timely submission of the final DOE approved deliverable.

3.7 Identification Badges

The contractor shall obtain from NETL, identification badges for its employees and the employees of its subcontractors while on-site at NETL. Identification badges shall be worn above the waist by all employees of the contractor and its subcontractors.

3.8 Reporting Requirements

The contractor shall be responsible for providing all the necessary and incidental services required to provide the Government with those reporting requirements

identified in the Reporting Requirements Checklist (see Appendix). The contractor shall also submit appropriate reports when directed by the COR or Task Monitors pursuant to the "Technical Direction" clause of the contract or whenever contract requirements are changed by contract modification.

3.9 Quality Assurance Plan

The contractor shall prepare Quality Assurance Plan for construction tasks as well as other task in which the COR determines that such a plan is required. The plan, as a minimum, shall include:

(a) A list of contractor submittals, in check sheet format, showing specifications, drawings, references and key dates;

(b) A list of tests and inspections showing COR or his representative sign-of dates. The test and inspection descriptions shall include test procedures code references, test equipment, nameplate date, calibration dates, test personnel, qualifications, etc.;

(c) A project baseline data and schedule;

(d) A roster of key construction personnel;

(e) Minutes of conferences;

(f) Work breakdown structure;

(g) Quality control plan.

3.10 Design Documentation

The contractor shall prepare design documents which present in comprehensive fashion all information along with any other information required for accuracy or completeness. The minimum contents of the design documents shall be:

(1) Detailed description of project scope;
(2) Project requirements and feasibility studies;
(3) Cost estimates with back-up details including any special projects;
(4) Procurement and construction schedules;
(5) Security requirements;
(6) Safety evaluation and analysis;
(7) Specifications in accordance with the Construction Specification Institute (CSI) Manual of Practice, volumes I and II, or in format as required by the COR;
(8) Applicable codes, standards, and quality levels;

(9) Environmental assessment to include the standard NETL Form, "Environmental Assessment Checklist" (see Section 4.2), for each task assigned;
(10) Impact statement; and other NEPA Documents;
(11) Life cycle costing analysis.

The contractor shall prepare specifications and drawings for bidding in a format approved by NETL, and shall submit draft copies to NETL for review, comment and approval. Intervals for work review will be established on a task by task basis by the COR or the Task Monitor. Copies of draft and schedule of submission shall be in accordance to the reporting requirements of Section 4.4.

3.11 Drawing Format

The contractor shall prepare and submit drawings of sizes and formats in accordance to the NETL drawing standard or standard approved by the COR. The computer generated drawings which will be required in all facility and construction task shall be in accordance to the NETL CADD drawing standard or format approved by the COR.

3.12 Statement of Work

Professional architectural and engineering design services called for by this contract shall be performed locally unless otherwise authorized by the CO. All services provided by the contractor shall be approved by the COR and authorized by the CO on a task order basis.

Work to be accomplished under this contract will involve tasks of the following nature:

(a) Title I Preliminary Design Services (b) Title II Detailed Design Services
(c) Title III Construction/Fabrication Inspection Services
(d) In-House Energy Management Activities
(e) Computer Aided Drafting and Design Support Services
(f) Value Engineering Activities
(g) Process Engineering Support Services
(h) Facility Condition Assessment
(i) Other Technical Support Services

3.12.1 Title I - Preliminary Design Services

3.12.1.1 Conduct or arrange for, by subcontract or otherwise as approved by the Contracting Officer, and supervise all necessary topographical and other field surveys, the preparation of maps or taking of aerial photographs, and necessary test borings and other surface investigations;

3.12.1.2 Consult and collaborate with DOE to determine the requirements which will govern the design of the project and to establish architectural and engineering criteria using NETL Technical Standards and DOE Orders particularly order No. 6430.1 titled "General Design Criteria," Order No. 4330.2C titled "In-House Energy Management," and Order No. 4010 titled "Value Engineering";

3.12.1.3 Conduct preliminary studies, and prepare preliminary sketches, drawings, layout plans, outline specifications, and reports showing features and characteristics for the candidate designs proposed to meet DOE's requirements.

3.12.1.4 The drawings, plans, and outline specifications, documents, and final title I Report shall be prepared in such form and furnished in such quantity as directed by DOE. The final Title I Report will be complete with conclusions, recommendations and assumptions.

3.12.1.5 Prepare preliminary estimates of cost and time schedules for (a) completion of the design, working drawings, and specifications, and (b) construction.

3.12.1.6 Prepare preliminary estimates of material quantities required for construction.

3.12.1.7 Prepare preliminary value engineering estimates and engineering assessments.

3.12.1.8 Inspect the existing condition of Real Property to determine general condition, remaining lifetime, and cost of replacement. The data collected shall be used to establish recommended renovations or upgrades.

3.12.1.9 Prepare the energy conservation analysis report. For retrofit projects or projects whose energy savings can be realized, prepare Schedule 44 (Construction project Data Sheet) life cycle cost analysis, economic analysis summary sheet and other reports as required for submission to the In-House Energy Management Program.

3.12.2 Title II Detailed Design Services

3.12.2.1 Undertake the design of the construction project for the approved Title I design.

3.12.2.2 Undertake restudy and redesign work due to minor deviations from the approved preliminary work as may be required by DOE.

3.12.2.3 Prepare and revise, for the approval of DOE, and furnish complete sets of contract bidding working drawings, details, bills and materials and specifications for construction, in such form and quantity and including such provisions as may be required by DOE.

3.12.2.4 Prepare detailed estimate of the cost of construction based on the approved design and working drawings and specifications.

3.12.2.5 Assist DOE in analyzing and evaluating construction bids.

3.12.2.6 When requested, consult with and advise DOE on any questions which may arise in connection with the architect-engineer services described in this contract.

3.12.2.7 Complete the standard NETL form "Environmental Assessment Checklist, 11 Attachment II, for each construction project.

3.12.2.8 Conduct value engineering analysis at the approved completion level to optimize selection of competing systems, using life-cycle costing principles, and prepare a report with conclusions and recommendations.

3.12.2.9 Prepare energy conservation report analysis and other energy management reports.

3.12.3 Title III - Construction/Fabrication Inspection Services

3.12.3.1 Furnish and maintain lines and benchmarks to provide horizontal and vertical controls to which construction progress may be referred.

3.12.3.2 Check and recommend DOE approval or required revision of, all vendors' shop drawings to assure conformity with the approved design and working drawings, specifications and NETL Technical standards.

3.12.3.3 Inspect and execution of construction so as to recommend DOE acceptance and assure adherence to approved working drawings and specifications.

3.12.3.4 Prepare estimates of reasonable amounts of increase or decrease in contract price and/or contract completion time for contract modifications, evaluate proposals submitted by the constructor for such contract adjustments, and make

recommendations to the Contracting Officer for use in negotiating.

3.12.3.5 Prepare material and equipment delivery status or expediting reports and make recommendations on status of materials and equipment as DOE may require or approve.

3.12.3.6 Prepare monthly and other reports of the progress of construction, as may be required, such as (a) Construction Executive Report; (b) Daily Diary; (c) Schedule Analysis Report that analyzes the schedule, a description of the critical path, and other analyses, as necessary to compare planned performance with actual, and (d) Monthly Report on the work progress of the separate subcontractors, long lead contractors and general conditions of the work; safety and labor relations program, job site meetings, problems encountered and recommendations; plans for the succeeding month; and partial, interim, and final estimates and reports of quantities and values of construction and reports of quantities and values of construction work performed, for payment or other purposes.

3.12.3.7 On energy retrofit projects, prepare a report to show savings, project achievement, goals, and energy analysis.

3.12.3.8 Furnish 1 set of reproducible mylar Auto Cad Files and one set of print "as built" record drawings of the type specified by DOE (see Reporting Requirement Checklist on Section 4.4).

3.12.3.9 Provide on-site resident engineer/inspector as required by the COR.

3.12.4 <u>In-House Energy Management (IHEM) Activities</u>

3.12.4.1 Conduct IHEM energy conservation analysis on construction activities. Prepare the necessary forms to assist NETL in submitting IHEM proposals.

3.12.4.2 Conduct surveys and studies to improve the energy efficiency on NETL facilities. Perform building energy appraisals, identify the energy conservation opportunities and conduct economic evaluations.

3.12.4.3 Assist in preparing the 10-year energy management plan for NETL. Prepare annual update.

3.12.4.4 In the design of any heating system, assure that non-critical fuel are utilized, as required under the Powerplant and Industrial Fuel Use Act.

3.12.4.5 Prepare shared energy savings project proposals.

3.12.4.6 Prepare life cycle cost analysis wherever required.

3.12.5 Computer Aided Drafting and Design CADD Support Services

3.12.5.1 Provide support to NETL in the design and implementation of a CADD System. Consult and assist in the design and selection of the architecture, hardware, software and area networking of the CADD System.

3.12.5.2 Develop and/or update the NETL drafting and CADD standards.

3.12.5.3 Consult and assist in the design of the drawing control and management system.

3.12.5.4 Develop CADD drawings on facilities as assigned by COR.

3.12.6 Value Engineering (VE) Activities

3.12.6.1 Where applicable, use VE analysis in construction activities and other A/E Services.

3.12.6.2 Apply VE to identify and eliminate unnecessary and non-cost-effective elements in all applicable A/E services.

3.12.6.3 Consult and assist NETL in maintaining VE criteria and all A/E services and construction activities.

3.12.6.4 Prepare VE reports to assist NETL in criteria development, budget requests and VE analyses.

3.12.7 Reserved

3.12.8 Condition Assessment

3.12.8.1 Inspect the existing condition of Real Property to determine general condition, remaining lifetime, and cost of replacement.

3.12.8.2 Enter all data collected into an active operations/maintenance program for definition and prioritization of fiscal year programs.

3.12.9 Other Technical Support Services

3.12.9.1 Prepare engineering investigations and study of activities such as the analysis of existing sub-surface facilities, code compliance evaluations and technical adequacy of site facilities, master site plan, safety analysis, project quality assurance plans space and traffic items, metes and bounds survey, technical standard development, miscellaneous special energy and technical studies and reports, structural integrity studies, construction deficiency lists, certification inspections, all with conclusions, recommendations, and construction cost estimates for subsequent actions.

3.12.9.2 Provide A/E services in support of other facilities managed, controlled, or maintained by NETL.

3.13 Other Reference Documents

In addition to the DOE Orders listed in 3.3.1, other reference documents such as those listed below may also apply:

3.13.1 CSI Manual of Practice - Volume 1, “Project Manual Procedures and Techniques” and Volume 2, “Formats, Specifications and Manuals;”

3.13.2 DOE/CS-0132 (Feb. Architecture and Engineer 1980), “Guide and Energy Conservation in Existing Buildings;”

3.13.3. NBS Handbook 135, Life Cycle Costing Manual, (Rev. 1987);

3.13.4 NBS Technical Note 1222 (May 1986), “A User's Guide to the Federal Building Life-Cycle Cost Computer Program;”

3.13.5 DOE/MA/06212-1, “Site Development Planning Handbook;”

3.13.6 DOE/MA-6212-2, “Site Development Planning Handbook Supplement;”

3.13.7 DOE/MA-0129, “Site Development Planning for Energy Management;”